

REMARKS

Claims 18-19 have been cancelled. Claims 5, 8 and 10-15 have been amended. New claim 21 has been added to more clearly claim the invention. Claims 1-17 and 20-21 are pending in the application.

The Examiner objected to claims 10, 12 and 14 because of informalities consisting of mistyped words.

Claims 10, 12 and 14 have been amended accordingly. Claims 13 and 14 have been amended to correct additional mistyped words.

The Examiner rejected claims 1-4 and 18-20 under 35 U.S.C. §102(e) as being clearly anticipated by *Li* (U.S. Pat. No. 6,349,091).

Claims 18 and 19 have been canceled.

Applicant acknowledges the Examiner's assertion that *Li* describes a type of two tier network. The applicant, however, believes that the multi-tiered network, as claimed by Applicant, is fundamentally different than that described in *Li*.

Li describes a network wherein, "The architecture of network 2 is similar to that of conventional cellular telephone systems," (col. 4, lines 15-16). In *Li*, "Each cell or cluster includes corresponding cluster member nodes 10 with one of those cluster member nodes designated as a cluster head node or base station 14," (col. 4, lines 3-5). In *Li*, the base stations communicate both with other base stations and with member nodes within their respective clusters. Each base station, therefore, is simultaneously a member in each tier of the network and simultaneously provides communication with multiple nodes within each tier. Communication within the upper tier between base stations is solely for the purpose of providing communication between the clusters.

While this configuration has two tiers of communication it does not teach or suggest the multi-tiered network as claimed by Applicant.

In Applicant's claimed invention, the primary purpose of each node is to provide communication between nodes within their respective tiers. The upper tiers of the network

provide enhanced levels of communication, typically faster speeds, but at the cost of more restrictive operational characteristics (i.e. line of sight requirements). A secondary purpose of some of the nodes in all tiers is to provide communication between tiers. While these nodes may communicate with multiple nodes within their respective tier they typically communicate with only one node residing in a different tier. These nodes are referred to as sink nodes and are specifically claimed by Applicant in claim 1. Unlike *Li*, communication between tiers occurs between two distinct sink nodes operating within different tiers. In *Li*, there are no sink nodes. All nodes in the upper tier are simultaneously upper and lower tier nodes providing communication to multiple upper tier and lower tier nodes. Applicant asserts that claim 1 of Applicant's invention distinguishes Applicant's invention from the network described in *Li*.

Regarding claim 4, Applicant respectfully asserts that the Examiner incorrectly equates the base stations of *Li* with the sink nodes of Applicant's claimed invention. As stated earlier, *Li* does not teach or suggest sink nodes as claimed by Applicant. Instead, each of the base stations in *Li* is simultaneously an upper tier and a lower tier node and is necessarily co-located. In Applicant's claimed invention, the sink node of one tier communicates with a sink node of another tier level. The sink nodes of two different tiers may, or may not, be co-located depending on the particular implementation. Applicant respectfully asserts that claims 1-4 and 20 are allowable and distinguish Applicant's invention from the prior art.

The Examiner objected to claims 5-17 as being dependent upon a rejected base claim but would allow them if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

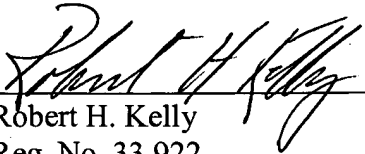
Claims 5, 8, 11 and 15 have been amended accordingly. Claims 6-7, 9-10, 12-14 and 16-17 are allowable as they depend from amended claims 5, 8, 11 and 15.

Applicant asserts that the claims as amended are allowable. Applicant respectfully requests that the Examiner remove all rejections and place the claims in condition for allowance.

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Respectfully submitted,

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